

Application No. 09/888,264  
Amendment dated October 5,2005  
Reply to Office Action of July 26, 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (currently amended) A method for screening for compounds that affect mitochondrial uncoupling, comprising:
  - a) contacting a mammalian cell or tissue sample with a candidate compound;
  - b) analyzing ~~the an isolated~~ contacted mammalian cell or tissue sample for expression of a polypeptide having at least 95% amino acid sequence identity to a polypeptide encoded by SEQ ID NO:1 or 2, wherein the polypeptide having at least 95% sequence identity has mitochondrial uncoupling activity; and
  - c) analyzing mitochondrial membrane potential of ~~an~~ the isolated contacted mammalian cell or tissue sample,  
wherein a change in expression of the polypeptide having at least 95% sequence identity indicates that the compound affects mitochondrial uncoupling.

2-27. (canceled)

28. (previously presented) The method of claim 1, wherein the mammalian cell or tissue sample is a human cell or tissue sample.

29-33. (canceled)

34. (previously presented) The method of claim 1, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:1.

35. (previously presented) The method of claim 1, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:2.

Application No. 09/888,264  
Amendment dated October 5,2005  
Reply to Office Action of July 26, 2005

36. (previously presented) The method of claim 28, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide encoded by SEQ ID NO:1.

37. (previously presented) The method of claim 28, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide encoded by SEQ ID NO:2.

38. (previously presented) The method of claim 1, wherein the candidate compound is a member selected from the group consisting of a small molecule, a polynucleotide, a modified polynucleotide, a polypeptide, an antibody, an antibody fragment and a modified antibody.

39-40. (canceled)

41. (currently amended) A method for screening for compounds that affect mitochondrial uncoupling, comprising:

a) contacting a mammalian cell or tissue sample with a candidate compound; and  
b) analyzing the an isolated contacted mammalian cell or tissue sample for expression of a polypeptide encoded by SEQ ID NO:1 or 2,

wherein a change in expression of the polypeptide indicates that the compound affects mitochondrial uncoupling.

42. (canceled)

43. (previously presented) The method of claim 41, further comprising analyzing mitochondrial membrane potential in the sample.

44-45. (canceled)

Application No. 09/888,264  
Amendment dated October 5,2005  
Reply to Office Action of July 26, 2005

46. (previously presented) The method of claim 41, wherein the mammalian cell or tissue sample is a human cell or tissue sample.

47-51. (canceled)

52. (previously presented) The method of claim 41, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:1.

53. (previously presented) The method of claim 41, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide having at least 95% amino acid sequence identity to the polypeptide encoded by SEQ ID NO:2.

54-73. (canceled)

74. (previously presented) The method of claim 41, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide encoded by SEQ ID NO:1.

75. (previously presented) The method of claim 41, wherein the analyzing of expression of the polypeptide comprises analyzing expression of a polypeptide encoded by SEQ ID NO:2.

76. (previously presented) The method of claim 41, wherein the candidate compound is a member selected from the group consisting of a small molecule, a polynucleotide, a modified polynucleotide, a polypeptide, an antibody, an antibody fragment and a modified antibody.

77. (previously presented) The method of claim 1, wherein the mammalian cell or tissue sample is a liver cell or tissue sample, white adipose cell or tissue sample, or skeletal muscle cell or tissue sample.

Application No. 09/888,264  
Amendment dated October 5,2005  
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78. (previously presented) The method of claim 41, wherein the mammalian cell or tissue sample is a liver cell or tissue sample, white adipose cell or tissue sample, or skeletal muscle cell or tissue sample.